



JPL Laser Hygrometer (JLH)



Measurement: water vapor (*in situ*).

JLH Team:

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Technique:

Near-infrared tunable diode laser
absorption spectroscopy,
wavenumber = **7299.4 cm⁻¹**
(**1369.98 nm**).

Specifications:

- Detection range: 1 to 1000 ppmv
- Pressure range: 40 to 500 hPa
- **Accuracy: better than 10%**
- **Precision: 0.03 ppmv**
- Time-resolution: 1.3 sec
- Mass: 20 lbs.
- Power: 100 W (maximum)
- Voltage: 28 V DC



Mounting:

- Underwing hatch on WB-57 right wing.
- Blue housing contains laser and detector.
- Optical cell is external to the aircraft.
- White structure holds mirrors in place.